

REMARKS

The Office Action dated July 2, 2004 has been carefully reviewed, together with the cited references and the claims of the captioned application. For the reasons set forth below, it is believed that the claims are now allowable over the prior art of record.

Petition to Make Special

Filed with the above-captioned application was a *Petition to Make Special Under 37 CFR § 1.102(c)*. The Office Action does not indicate whether or not the petition was granted. The Examiner is respectfully requested to forward the petition to the appropriate section for decision thereon.

Rejections Under 35 U.S.C. § 102

Claims 1, 2, 9, 13, 14 and 18 are rejected as being anticipated by U.S. Pat. No. 4,152,875 by Soland. The Soland patent reference teaches a method of installing blocks or plates on a ground surface, with cables tensioning the plates together to form a locked mat. Each cable used to fasten a mat of plates together is threaded through the plates of a row in a linear path, and then terminated with an anchor to maintain the plates in tension.

Claim 1 has been amended to broaden the scope of the claim. Amended claim 1 now specifies that at least one cable is routed through the cable channels of blocks of a mat in a zig-zag manner, where the cable ends terminate at different sides of the mat. One embodiment is illustrated in Fig. 4 with cable 74₁ which starts at the top side of the mat 70 (at top corner block 76), is routed diagonally down to the left edge of the mat (around blocks 80 and 82), and then routed diagonally down to the right to the bottom side of the mat (to bottom block 84).

The method of claim 1 is in sharp contrast with the method suggested in the teachings of the Soland reference. In the cited reference, the cables are not threaded in a zig-zag manner, as claimed. Rather, the cables of the Soland method are routed in a North:South/East:West pattern, and extend in a linear path only from one side of the mat to the other side, without any zig-zag pattern. Stated another way, one end of a cable terminates at one side of the mat, and the other end of the cable terminates at the opposite side of the mat, without being rerouted through the mat. The Soland cables are threaded through the mat in a linear manner because they are then stretched and placed in tension, as in pre-stressed concrete structures. In Fig.1 of the reference, each cable 19 is tensioned and constrained in tension by an anchor at each cable end, shown as reference character 20. See the paragraph bridging columns 3 and 4, and column 6 lines 8-23. It is well known that a cable, such as the wire cable described in the Soland reference, cannot be tensioned around a corner or bend, such as would be required with a cable routed in a mat in a zig-zag manner. An attempt to tension a cable around a corner would result in a kink in the cable which would weaken it, or fracture of the block around which the cable is bent.

From the foregoing, the Soland reference does not identically disclose all of the limitations of claim 1. As such, claim 1 is not anticipated by the cited reference. The teachings of the Soland reference do not suggest the threading of a cable in a zig-zag manner, as to do so would be detrimental to conventional practices in tensioned concrete structures.

Dependent claim 2 has been amended to specify that the cable exits a cable channel of one block, is routed in a different direction, and routed through a cable channel of an adjacent block. This change of direction of a cable routed through a mat of blocks is not disclosed or suggested in the Soland reference.

Independent claim 9 specifies that the cables of a mat of blocks are threaded through the mat in a zig-zag manner. For the same reasons described above in connection with claim 1, claim 9 is patentable over the Soland reference. In addition, claim 9 specifies that the cable ends are attached to the ends of other cables. In the Soland reference, each cable end is terminated by a tension anchor.

Claim 13 specifies a cable loop that is formed between adjacent blocks. As noted above, the Soland reference utilizes only linear lengths of a wire cable, which is not looped around the blocks. Accordingly, claim 13 is patentable in its own right over the cited reference.

Claim 14 depends from claim 13, and is patentable for the same reasons. Moreover, claim 14 specifies the use of the loop to connect the mat to another mat of blocks. Because the cited reference does not suggest this method step, claim 14 is patentable over the prior art of record.

Claim 18 is patentable for the same reasons noted above in connection with claim 9.

Rejections Under 35 U.S.C. § 103

Claims 3-8, 10-12, 15-17, 19 and 20 are rejected as being made obvious by the Soland reference, in view of U.S. Pat. No. 6,276,870 by Smith. The Smith patent reference discloses a mat of interlocking blocks with a hole in each block through which the cables are routed for allowing repair or replacement of a broken block. The interlocking blocks of the Smith patent are formed with cable channels extending therethrough in a North:South/East:West coordinate pattern, rather than in a diagonal pattern.

Assuming arguendo that the teachings of the Soland patent could be combined with the teachings of the Smith patent, the result would perhaps be the blocks of the Smith patent having diagonal cable channels, and the blocks would be cabled in the manner suggested by the Soland

reference. Indeed, the teachings of such references cannot be combined for the reasons set forth below in connection with claim 19. However, even if combined, there would be no zig-zag path for the various cables throughout the mat, only a + pattern of cables routed in respective linear paths. Thus, by combining the teachings of the cited references, claims 1-18 of captioned application are not made obvious, as each such claim specifies either directly or indirectly a zig-zag path of one or more cables in the mat. Nevertheless, the claims rejected as being obvious are addressed individually below.

Claim 3 is patentable for the same reasons noted above in connection with claim 1.

Claim 4 has been amended to specify that the manner in which the cables are coupled together results in two cables routed in the same cable channel of the block. This is neither disclosed nor suggested in the prior art of record.

Claims 5 and 6 are believed to be patentable for the same reasons noted above in connection with claim 1.

Claim 7 specifies, among other things, a loop in a cable extending through a cable channel of a corner block of the mat. As noted above, the Soland reference discloses each cable end terminated in a tension anchor, and not a loop. As such, claim 7 is patentable in its own right over the cited references.

Claims 8 and 10 are patentable for the same reasons noted above in connection with claim 1.

Claims 11 and 12 are patentable, as there is specified therein the connection of *two cables* together in the opening of the block. This contrasts with the teachings of the Smith patent, where the *same cable* is cut to replace the broken block, and then the ends of the same cable are spliced together in the opening of the new block. In the method of claims 11 and 12, different cables are attached together in the opening, not just the ends of the same cable as suggested in the Smith reference.

Claims 15 and 16 are believed to be patentable for the same reasons noted above in connection with claims 1 and 9.

Claim 17 specifies the anchoring of a cable in the opening of a block, to another cable by looping the cable end around the other cable. This method is not suggested in the cited references.

Independent claim 19 specifies interlocking type of blocks having male members of one block interlocking into female members of a neighbor block. The blocks have diagonal cable channels extending therethrough which intersect in the central openings of the respective blocks.

The Soland patent refers in the Background portion thereof to a block described in a Swiss patent. The block includes tongue and groove engagement structures to lock the blocks together (see column 1, lines 32-47). The Soland patent describes this tongue and groove interlocking arrangement as a drawback, because it provides poor drainage of rain water, thus causing pooling of water (see column 1, lines 48-49 and column 2, lines 1-11). The blocks or plates described in detail in the Soland reference do not have any tongue or groove interlocking arrangement, but rather have linear spaced-apart edges to provide straight channels between the blocks to provide drainage of water to thereby reduce pooling. This would seem to be important, as some of the various uses of the Soland plates are for highways and aircraft runways (see column 1, lines 19-32). The importance of good water drainage provided by the plates is set forth in the Soland patent at column 3, lines 41-46 and column 6 lines 24-28 and 51-54. According to the teachings of the Soland patent, the plates are not interlocked with tongue and groove structures, which provide poor drainage, but rather are interlocked together with tensioned cables and spacers between the plates.

One skilled in the art attempting to employ blocks cabled together would not be led to use the interlocking blocks disclosed in the Smith patent. In the Smith patent, the blocks have interlocking tongue and groove members, such as shown in Fig. 2. There can be a space between the blocks, if

pulled apart. However, the blocks can be engaged closely together to reduce or eliminate any space between the blocks, in which event there would be no water drainage channel. The Smith blocks are designed to have some degree of interplay between the blocks to provide articulation to accommodate uneven ground surfaces. If the Smith blocks were to be equipped with spacers therebetween and cabled in a tensioned manner, such as disclosed in the Soland patent, then the interlocking members would be superfluous.

In addition to the foregoing, if the various Smith blocks were to be pulled apart to the fullest extent to provide a drainage channel, the channel would be so circuitous that poor drainage would result. With respect to Fig. 2 of the Smith patent, if water were to drain down the space between blocks 50 and 52, the water would have to reverse course in going around the male member. Indeed, the water would have to reverse course as it encountered each block in the mat. This circuitous drainage route would be considered as a drawback according to the Soland teachings.

From the foregoing, the Soland patent teaches against the use of interlocking members for blocks, as the same does not provide adequate drainage of water from the mat. Accordingly, one seeking to employ a different block in the Soland mat, would not refer to the Smith patent and employ the interlocking blocks described therein. Indeed, the Soland patent teaches that the way to interlock blocks together is to use tensioned cables, and thus the use of interlocking blocks themselves would be unnecessary and an added expense for the more complicated Smith block. It is thus believed that the teachings of the Soland patent and the Smith patent cannot be combined in the manner suggested by the Examiner to establish a prima facie case of obviousness.

Claim 20 is patentable for the same reasons described above in connection with claim 19.

New Claims

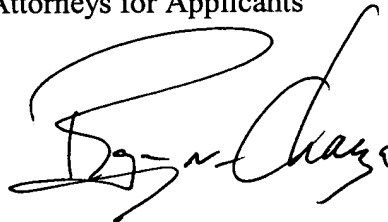
New claims 21 and 22 have been added to the application to more specifically define the invention of claim 19. The subject matter of claims 21 and 22 relate to the cabling technique described in the captioned application in connection with Figs. 4 and 5. Claims 21 and 22 are patentable for many of the same reasons set forth above.

A check in the amount of \$18 is enclosed herewith to cover the cost of two claims in excess of twenty claims. The U.S. Patent & Trademark Office is hereby authorized to charge any fees due or credit any overpayments to Deposit Account No. 502112/ERPP-0100US for the firm CHAUZA & HANDLEY, L.L.P.

Conclusion

From the foregoing, the Examiner is respectfully requested to reconsider the rejections of the claims and grant full allowance of the application.

Respectfully submitted,
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A handwritten signature in black ink, appearing to read "Roger N. Chauza", is written over a horizontal line.

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